

# MURS140 - MURS160

**PRV : 400 - 600 Volts**  
**Io : 1.0 Ampere**

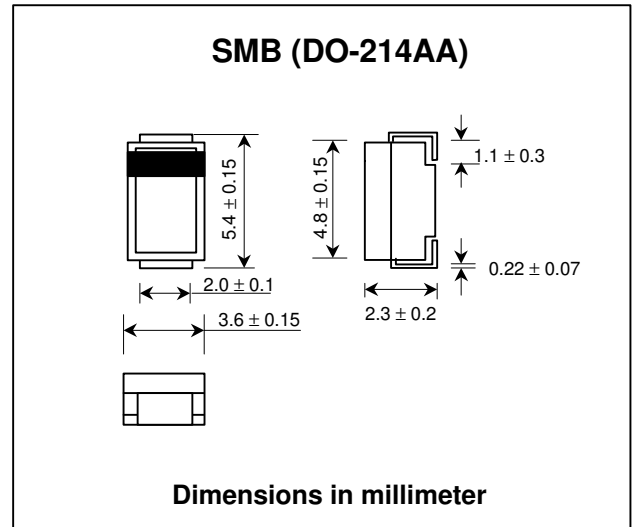
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ultra Fast Recovery Time
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SMB Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.093 gram

# SURFACE MOUNT ULTRA FAST RECTIFIERS



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

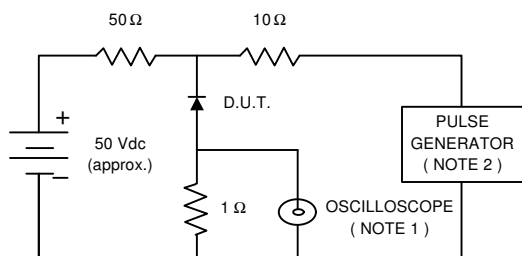
RATING	SYMBOL	MURS140	MURS160	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	400	600	V
Maximum Working Peak Reverse Voltage	VRWM	400	600	V
Maximum DC Blocking Voltage	VDC	400	600	V
Maximum Average Forward Current TL = 150 °C See Fig. 1 TL = 125 °C	IF(AV)	1.0 2.0		A
Maximum Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	35		A
Maximum instantaneous Forward Voltage (1)	VF	at IF = 1.0A , TJ = 25°C 1.25		V
		at IF = 1.0A , TJ = 150 °C 1.05		
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage(1) TJ = 25°C	IR	5		μA
	IR(H)	150		μA
Maximum Reverse Recovery Time (2)	Trr	50		ns
Operating Junction and Storage Temperature Range	TJ, TSTG	- 65 to + 175		°C

### Notes :

- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle ≤ 2.0%
- (2) Reverse Recovery Test Conditions : IF = 0.5A, IR = 1A ; Irr = 0.25 A

## RATING AND CHARACTERISTIC CURVES ( MURS140 ~ MURS160 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise Time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.

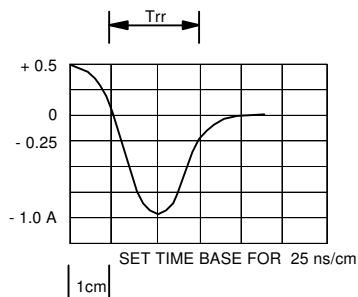


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

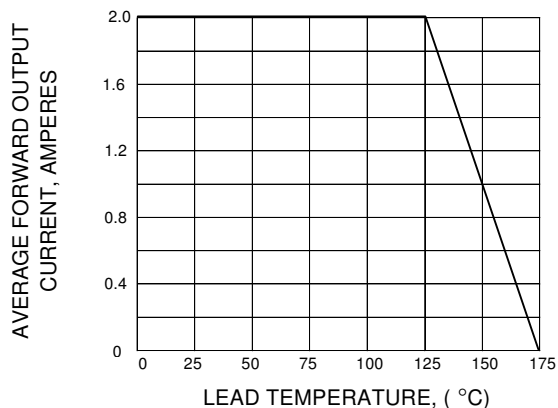


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

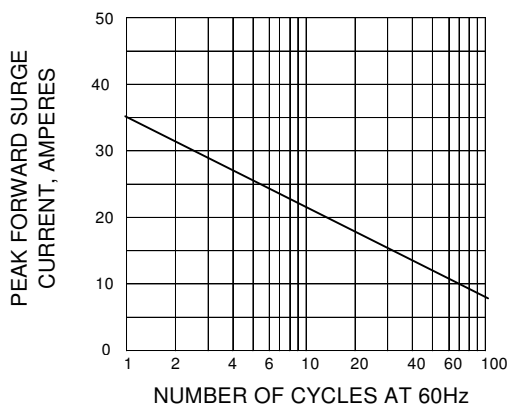


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

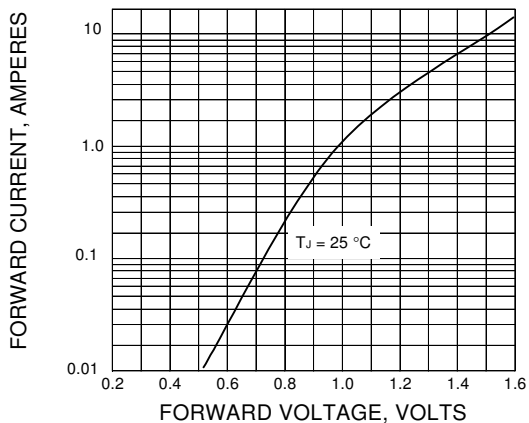


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

